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E Elder, William.

The University,---Medieval and Modern.

# AN ORATION:

DELIVERED AT THE <sup>AE</sup>ENCENIA

OF THE

UNIVERSITY OF NEW BRUNSWICK,

On the 21st of June, 1871,

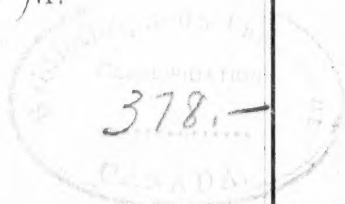
BY

WILLIAM ELDER, A. M.

[Published by request of the Alumni Association.]

H. CHUBB & CO., ST. JOHN, N. B.

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# ORATION.

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*Mr. President and Gentlemen of the Alumni Association :*

Having for several years known and warmly appreciated the noble aims of your Association, and the excellent work done by the learned President and other Professors of this University, it affords me much pleasure to be with you on the present festal occasion. I feel, however, as if this Academic gathering, after ancient precedent, ought rather to be held out of doors, in those smiling fields and fragrant gardens which surround the charming retreat of learning. There, we might together listen to the songs of the birds and the brooks, and there, in opening buds and cheerful notes, you might find pleasing symbols of your own blossoming hopes and joyous feelings. Most sincerely do I trust that those natural symbols may prove true prophets of a future career, in which none of you shall ever "ill-beseem the promise of your spring;" on the contrary, I hope that, strengthened by the generous nurture of your *alma mater*, and cheered by the benedictions which, from bright eyes and loving hearts, are wont to be rained upon you, in this place, on occasions like the present, you will go forth to the great world without, resolved to be honest and earnest workers therein, ever proving true to yourselves, your country and your God.

I did not require to be reminded by the Oration† just delivered, and it is with regret that I recall the fact, that if the present be a season of gladness to you, it is also one of gloom. One chair in this University is this day vacant. The voice of one beloved Professor will no more be heard within these walls. This is, indeed, cause for sorrow. To Professor Campbell's numerous friends, there is, however, one source of comfort left. They all know how accurate and profound he was as a scholar, how successful as a teacher, how much loved as a man, and they must feel that of all such beloved and patriotic workers, now no more, men who consecrated to the cause of liberal culture, in these new seats, their treasures of learning, wherever they may have been acquired, it may well be said:

† That of Professor D'Array, which was read by Professor Bailey, Professor D'Array being unwell.

And though no stone may tell,  
 Their name, their fame, their glory,  
 They *live* in hearts that love them well,  
 They grace Britannia's story.

You do well, I think, to encourage such Academic gatherings as the present. They afford opportunities, however limited by time and space, of taking note of what is going on in the great schools of learning, and of the nature and extent of the demands that are being made upon them. It would be difficult to estimate too highly the importance of such inquiries. Indeed, unless they are pursued, many of the efforts of your Association, and much of the teachings of your Professors, may be expended in vain, and this, too, in an age, one of whose chief aspirations it is to economize all its forces, and to employ them to the greatest advantage. The horizon of knowledge is ever extending, the fields of honourable toil and enterprise are ever being enlarged, the calls of duty are daily being multiplied. Yet life is comparatively short. How important then that all of its possibilities and opportunities should be turned to the best account, and not so misused as to lead to vain regrets :

For of all sad words of tongue or pen;  
 The saddest are these: "It might have been!"

It may readily be inferred that the University, which has now been in existence for nearly eight centuries, has been subject to various changes, in the method and matter of the studies which it has from time to time promoted. The University idea has ever been to impart the highest and best nurture of the period, whatever the nature of that nurture may have been ; but the studies of a time when the clergy were the only learned class and themselves not very learned, when they were the principal physicians and lawyers, when manuscripts were scarce and dear, and paper and printing and public libraries unknown in Europe, were necessarily somewhat different from those of subsequent and more highly favoured periods. Towards the close of the eleventh and the early part of the twelfth century, we find the great schools of Paris and Bologna, Oxford and Cambridge, assuming the name and rank of Universities. From that period until the present time, century by century, fresh acquisitions have been made to the muster roll of the Universities. Some of the earliest have been swept away, but others of them still retain a vigorous existence. The name, University, however, as applied to institutions of learning, had not, at



first, any scholastic reference, and was generally qualified by the adjective literary. The term University simply signified a corporation or any number of persons or things taken as a whole. The municipality of York, or the Common Council of St. John, would, in the eleventh century, have been entitled to be called a University. The term is applied to the body of the people by a poet who lived in the time of Simon de Montford. Advising that the representatives of the people should be summoned, that their minds might be known, i.e. the old rhyming Latin of the period, he says :

*Igitur communitas regni consulatur,  
Et quid Universitas sentiat sciatur.*

As first applied to institutions of learning, the term University was used in reference to the incorporated and governing body of teachers and students, as at Paris, or the incorporated and governing body of students, as at Bologna. When, in the course of time, by a useful division of Academic labour, the faculty of Theology arose out of that of Arts, and when the new faculties of Law and Medicine, after a sharp struggle, effected their recognition by the University, by a natural transition, the term soon came to be applied to the aggregate of the faculties, carrying out the etymological idea of completeness ; although then, as now, the term continued to be applied to single professional schools, and schools of Arts having no other faculty in connection with them. I have no doubt, however, that Universities will yet arise, both in the old world and the new, in which this idea of completeness will be fully realized. "The ideal University," says Chancellor Crosby, of the University of New York, "would include all arts, sciences, philosophy and technics, and the all of these. A living mind would communicate the truth in each of these departments, and the truth, in each case, would be *all* the truth known to man, in relation to the given subject. Such is the ideal University. The actual Universities of the world may be considered attempts *longo intervallo* to reach this idea." I may add that the great Universities of Paris, Turin, Vienna and Berlin, each with its grand cluster of nearly two hundred professors and other instructors, with their vast libraries, museums, laboratories, and with their many learned men, enjoying great leisure, and making many original contributions to science and literature, already go far to realize this idea, although as we shall see, the faculties even of those Universities will probably, ere long, have submit to be re-constructed on a more liberal basis.

But to return. The history of the University divides itself into two

periods, the mediæval and the modern. The distinguishing feature of the former was the Scholastic Philosophy, which rose, declined and fell in about three hundred years. The modern period began with almost exclusive devotion to classics and mathematics, and now witnesses a vigorous, but not as yet triumphant, onset made by the votaries of the physical and social sciences against the study of the Greek and Latin languages as prime sources of mental culture.

Let us glance, for a moment, at those successive phases of University study, and, as our time is very limited, I shall have to ask you to supply in imagination what I cannot pause to describe at length.

The Scholastic Philosophy derives its name from the Schoolmen, and these again from the scholæ or schools which the great organizing genius of Charlemagne, with the co-operation of the Church, originated, and which were afterwards expanded into Universities,—the schools of our own Alfred, another great educational reformer, in the case of Oxford, at least, sharing in a similar honour. The Scholastic Philosophy was, to a large extent, based on portions of Aristotle's logic, imperfectly translated, and on extracts from the writings of St. Augustine and other Latin fathers, incorporated with texts of Scripture. These were the text books of the Universities at the beginning of the scholastic or mediæval period. The chronicles and legends, hymns and homilies of the time, formed the remainder of its scanty literature, for the authors of Greece and Rome were then known only to a few learned men, and were not read in the University, while the modern languages, descendants of the Gothic or the Latin, had not yet begun to bring forth fruit. The medium of instruction was the Latin, the tongue in which Lord Bacon, and even Sir Isaac Newton, wrote their principal works, the tongue which learned men, even in the seventeenth century, believed was destined to remain the learned language of at least the entire Christian world.

But limited as were the materials which the Schoolmen possessed, it must be admitted that they were turned to good account. The old seven liberal arts of the monastic schools—grammar, rhetoric and logic, called the trivium, and arithmetic, music, geometry and astronomy, forming the quadrivium—were greatly extended and comprehended under the common name of Philosophy. On its practical side this Philosophy embraced several liberal arts, including navigation, agriculture and hunting, but it was the theoretical Philosophy, that which gave its name to the chief intellectual nurture imparted by the University, that was the all-engrossing study. The Professors of it



readily improvised a place of study; indeed, the Professor made the school. To master this Philosophy, ardent youths, poor in pocket, but rich in enthusiasm, flocked to the Universities from all parts of the world, including Asia and Africa. They came in groups of ten, twenty and thirty thousand, though these numbers sometimes, as Professor Huber, in his history of the English Universities points out, included persons who were not regular students, such as copyists, parchment-makers, stationers, etc. They lived rudely together in groups called "nations," which represented their ethnic affinities, speaking their own languages and subject to a form of government adapted to their circumstances. They lived in those great boarding-houses, which afterwards, in many cases, grew into colleges, though occasionally even the rudest kinds of lodgings could hardly be procured, and in Oxford, at one time, the students were content to take refuge on the bastions of the city walls. Those enthusiastic lovers of learning sat at the feet of such renowned masters of disputation as William of Champeaux, Abelard, Lanfranc, Anselm, Peter Lombard, Albert the Great, Thomas Aquinas, Roscelin, Duns Scotus, Ockham, Alexander Hall and others, doctors angelic, and doctors seraphic, doctors invincible and doctors irrefragable. These teachers of the middle age often harangued in the open air to great multitudes of admiring students, whom they encouraged and required to engage in disputations, exercises which taxed all their powers to the utmost and in which the greatest ingenuity was displayed in supporting and attacking the theses which formed the subjects of contention, a mode of study, and a means of cultivating oratory, not sufficiently attended to in our own age. As in the first Napoleon's time, every soldier was said to carry a marshal's baton in his knapsack, and as in the German Universities, at present, every distinguished student sees a professor's gown in his wardrobe, however otherwise scanty, or that of a Private-Docent, at least, so in this, the heroic age of the University, when the degree of master or doctor, originally the same, constituted an actual license to teach, every graduate of high attainments and aspirations expected one day to be the centre of a famous school, or to eclipse his preceptor in his own University, as was done by Abelard in the case of William of Champeaux. It is somewhat the fashion to speak slightly of the Scholastic Philosophy, chiefly on account of its subtleties, which, in the absence of the facts of experimental sciences, the discoveries of a subsequent age, were often drawn out to an unpardonable length. Scholasticism is even by some regarded with feelings of contempt. But to say nothing of

its influence on the theology and philosophy of all subsequent times, no student of humanity, no honest truth-seeker, can ever entertain any such feeling towards any of the great products of the human mind, its languages, religions, philosophies. These must ever inspire our reverence and invite our study. If we gaze with awe upon the pyramids, mere material works of doubtful utility, with what feelings ought we to regard the most daring efforts of the most gifted and intrepid spirits of our race to harmonize philosophy and faith and solve some of the deepest problems which have ever exercised the minds of thinking men? What though the battles of the Nominalists, Realists and other philosophic sects, long fought with tongue and pen, not seldom fought with trusty bows and arrows, (the Alumni of those days not always being the well regulated young gentlemen whom we meet in ours,)—what though these and other kindred problems are now well nigh forgotten? The same may be said of many another philosophy, which though useful and infinitely elevating in its day, has long since passed away.

Our little systems have their day,  
 They have their day and cease to be,  
 They are but broken lights of Thee,  
 And thou, O Lord, art more than they.

We come now to the modern period in the history of the University, a period which the University of the middle age helped to introduce, the latter being a true development suitable to its own age. The Crusades, the direct products of the simple, earnest spirit of the times, resulted in the recovery of many precious manuscripts of the Greek and Latin authors, and their transference from the East to Europe. The study of these classical treasures first began to be prosecuted in retired monastic retreats. The native tongues were then just springing into vigorous existence, and beginning to give promise of their great future. Their cultivators began also to devote themselves to the reproduction of the Greek and Roman authors, in the modern languages. Greek authors were also translated into Latin. Then the disruption and, finally, the overthrow of the Eastern Empire came, one consequence of which was the wide diffusion of the manuscripts of the Greek and Roman authors. The printing press appeared at the same time to multiply copies of the newly discovered treasures and supply to the Universities and schools the long-forgotten poets, orators, historians and philosophers of Greece and Rome. It was as if those poets had now begun to sing to men for the first time; as if the ora-

tions of Cicero, the fulminations of Demosthenes, the pictorial delineations of Livy, the divine discourse of Plato, the terse, philosophic narrative of Thucydides, and the garrulous tale of Herodotus, were now heard or read for the first time. The minds of men soon became strengthened, their ideas enlarged and their imaginations fired by the new studies. A spirit of enterprise soon became developed, the recovery of old worlds, and the discovery of new, proceeding simultaneously. While the old learning lingered on, even during the fifteenth and seventeenth centuries in some of the Italian Universities, in most others the Humanists had already taken the place of the Schoolmen. The cultivators of the classics were now held in the greatest honour, and schools, colleges and universities began to re-arrange their prizes, honours and emoluments, with a view to encourage and reward the students of the Greek and Latin tongues. Mathematics, more earnestly pursued, however, at a later date, was the only rival study. Both were carried to a great height. The labours of the Humanists and of the later editors of classic authors favoured the one study: the discoveries of Copernicus, Galileo, Kepler, the philosophy of Bacon and Des Cartes, and the magnificent generalizations of Newton and his followers, gave an impetus to the other. It would seem, however, as if the human mind ever tends to extremes. In a short time the classics began to be regarded more as sacred relics, and sources of philosophical, antiquarian and grammatical niceties and puzzles, than as glorious literatures, and fit subjects for philosophic criticism. This abuse of classical study speedily exercised an unhealthy influence on the human mind. "A powerful mind," says Lord Macaulay, "which has been long engaged in such studies may be compared to the gigantic spirit in the Arabian tale, who was persuaded to contract himself to small dimensions in order to enter within the enchanted vessel, and when his prison had been closed upon him, found himself unable to escape from the narrow boundaries to which he had reduced his stature."

In recent years, a corrective to the excessive study of the classics, by absurd and unphilosophical methods has appeared. The mathematics, studied perhaps too closely, at first, as pure science, have passed into the form of mixed or applied sciences, and these again are being rapidly developed into the cluster of inventions and arts which are the peculiar glory of modern civilization. Astronomy peering into the most distant regions of the heavens, and now, by means of the spectroscope, performing more daring feats than ever previously at-

tempted; geology revealing the natural history of the earth, aided by several auxiliary sciences, zoology, mineralogy, botany; chemistry working wonders of which ordinary alchemists never dreamt, though Roger Bacon caught a glimpse of them, with fresh discoveries in regard to heat, light, electricity, magnetism; physiology casting metaphysics into the shade;—what amazing and awe-inspiring results have they not produced! The great practical science of modern times is engineering. The engineer girdles the globe with new highways of travel, by land and sea, overcoming the obstructions of nature by vast bridges or tunnels, or supplementing her defective routes of communication by means of canals constructed regardless of cost. He takes the thoughts of men, when expressed in speech, and by means of the electric current, transmits them across vast continents or beneath ocean's depths, winged by the lightnings and guarded by the billows. He thus annihilates time and space and makes distant nations happy by bringing them into intimate social and commercial intercourse. The forces used by the engineer are not the only ones which influence material progress, and the great value of which has riveted attention on the natural and mathematical sciences, and tended to withdraw it, to some extent, from that of the ancient languages. As Humboldt comprehensibly says, "it is now being clearly perceived that an equal appreciation of all branches of the mathematical, physical and natural sciences, is a special requirement of the present age, in which the material wealth and the growing prosperity of nations are principally based upon a more enlightened employment of the forces and products of nature."

But these are not the only studies demanding the attention of the moderns, which come into competition with the study of the ancient languages, and make corresponding demands on the modern University. There is the great cluster of social and political sciences relating to trade and commerce; capital and labour; the public health; the management of humane institutions, including the treatment of the insane, the deaf and dumb and the blind, and of inebriate asylums; the repression of crime; the proper treatment and reformation of criminals; education; political representation and the proper sphere of legislation; municipal, international, and civil law; emigration; pauperism; the last mentioned subject being to English statesmen one of the most perplexing questions of the day, in the solution of which they require the aid of the economic sciences. There is Gux's baby, for example, making his lusty voice heard over two continents, causing English

statesmen to stand aghast, as if pondering the inquiry, "what shall we do with him?" Here the whole Ginx family and all their kindred would be quite an acquisition, if only the Government, or Miss Rye, would bring them over, but we nevertheless need the light of science to guide us in dealing with such problems.

It may readily be inferred that the enormous demands made upon the time and attention of students, by these new sciences, have led some of them votaries to take strong grounds in opposition to the study of the classics, on the ground of their being of less practical utility. Indeed one of the great educational problems of the day is as to the relative positions which shall be assigned to the new studies and the old. It is, I think, established beyond a doubt, that a knowledge of the great mother tongues of the race, the Greek, the Latin, the Hebrew, the Sanscrit; those tongues which reveal buried civilizations and forgotten literatures of vast antiquity and great intrinsic value, and bring the souls of the moderns into contact with the spirit of antiquity, studies which reveal the free personality of the human spirit, and the range of its achievements, must ever form part of the highest nurture of the race. But the knowledge of the physical sciences is equally necessary and of the social sciences equally indispensable. I say then with Richter, that "the present ranks of humanity would sink irrecoverably if the youth did not take its way through the silent temple of the past into the market-place of life." But I say, also, even with such a Humanist and lover of "sweetness and light" as Matthew Arnold, that "it is a vital, formative knowledge to know the world, the laws which govern nature and man as part of nature." It is probable, then, that those who have not leisure and aptitudes for all these studies, those who never intend to follow up the ancient languages to that point at which they may be read with pleasure and their beauties begin to appear, will generally give their chief attention to those other all-important studies to which I have just referred. And as to the educational value of these latter studies, it may well be held that there exists a strong presumption that studies so necessary to self-preservation, to the conquest of the material world around us, and the development of its varied resources, and even to the right discharge of the duties of life, will prove useful for mental discipline as well as for furnishing the mind with that "knowledge which is power."

In view of this state of things, the Universities are being obliged to modify their courses of study and, in particular, to make new and extensive provisions for the study of the physical and social sciences.



They will also be compelled to make the study of the ancient languages a study of literatures rather than of grammatical niceties, a knowledge of which is to be determined by the perfection with which Greek hexameters can be written by the moderns. In the study of classics, at the preparatory schools, it is likely, also, that they will be reserved for the more advanced pupils, and more particularly for those who intend, as scholars, or as professional men, to pursue the study in after life. It is monstrous that the study should be imposed on those whose time at school is short, who regard it with disgust, will never follow it up, and who have the most pressing necessity for being taught the elements of the natural and physical sciences. In any case, the study of the poets of Greece and Rome, should be preceded by a study of the vernacular literatures; in our case by a study of the English tongue, with its galaxy of poets, orators, philosophers, historians, scientists, the equal of which no ancient language, nor all ancient languages together, can furnish. "What poets," says the author of *Levana*, "shall the teacher bring? Our own! Neither Greek, nor Roman, nor Hebrew, nor Indian, nor French, but German. Let the Englishman select English poets, and every nation its own. Only when we call to mind the poverty of the dark ages, whose seeming corpse the miracles of Greece and Rome re-animated, can we comprehend the existing absurdity of not educating and preparing the mind by means of native and young beauties, for those of foreign and distant ages, but of precisely reversing the matter and placing the youth among strangers, instead of among those who speak his mother tongue."

In addition to the question as to the quality of the studies to be pursued in the department of Philosophy or Arts, the Universities are now called upon to consider the question of the extension of the faculties. At the time that Theology, Law and Medicine received places coordinate with the faculty of arts, those were the only learned professions. But it is far otherwise now. Not only are many new chairs needed in the Universities, but new faculties must be admitted, with their appropriate degrees; failing this an entirely new class of Universities will be called into being. Even as matters stand, this is now being done to some extent.

In the German and some other continental Universities, the claims of the new candidates for academic honours are being received with favour. Political Philosophy has obtained a full faculty, and the wide range of studies which the statesman *ought to* pursue, undoubtedly re-

quires one. Moreover, schools of Pharmacy, Veterinary Science, Agriculture and Forestry, Mining and Engineering, and several other branches of knowledge have obtained a place within the shadow of the University. It is just announced that a Chair of Commerce has been established in the University of Edinburgh. It seems evident, too, that some of these will be advanced to the higher position of faculties, ere long, and others added, such as the Fine Arts, which have a faculty in the University of St. Louis; Mining and Engineering, Commerce and Manufactures, Agriculture, Naval and Military Science, Normal Instruction, and some other departments. A hopeful method of meeting the new exigencies, and one for which the old Mediæval Universities furnish a precedent, would seem to be, for all these new faculties to be arranged around the central faculty of Philosophy or Arts, to which they should also be required to do homage, as the sheaves of Joseph's brethren did to Joseph's sheaf.

Another mode of meeting the new requirements, more especially of Physical Science, or *Practical* or *Applied* Science, as it is frequently called, is by the erection and organization of separate Schools, Colleges and Universities for this purpose. Already in Switzerland, in some of the smaller Kingdoms of Germany, such as Wurtemberg, with a population about as large as Ontario, and more especially in Prussia, have many of these Schools, Colleges and Universities been established. There are hundreds of Technical Colleges, and six or seven Technical Universities, in the countries I have named, and their equipment is on the most magnificent scale. The Real Schools of Prussia are just deemed as essential as the Grammar Schools, Gymnasiums and Universities. It is only lately that England, to her amazement, discovered her need of such institutions. She saw her sons utterly vanquished at International Exhibitions by the superior scientific skill of other nations, and had occasion to recall the wise words of Prince Albert: "No human pursuits make any material progress until science is brought to bear upon them." In Mr. Scott Russell's plea for the "Systematic Technical Education of the English people," he addresses the Queen in these touching words:

"The object of this dedication is to entreat your Majesty to consider the case of the uneducated English folk, who are now suffering great misfortunes in their trades, commerce and manufactures, as well as in their social, moral and intellectual condition, through having been neglected and allowed to fall behind other nations, better cared for by the men whose duty it was to lead as well as to govern the people."

"If your Majesty," he adds, "will only say the word, the thing will be done and a generation of educated Englishmen and English women will speedily come forward and bless your Majesty for having given it the greatest blessing an enlightened monarch can bestow on a loving people."

The Parliament, the Universities, the Colleges, the Schools of Great Britain and Ireland, have been moving in the matter of Science Education, but, as yet, they are a quarter of a century behind Germany and Switzerland. In the United States, one great Industrial University has been formed, that of Cornell, with its nine Colleges of Agriculture, Chemistry, Physics, History and Political Science, Languages, Philosophy and Literature, Mathematics and Engineering, Mechanic Arts, Military Science and Natural History. "I would found an institution where any person can find instructors in any study," said Mr. Cornell, and these words form the motto of the University. Schools of Science have been established in connection with several Universities, such as Yale and Harvard. Columbia College, New York, is a school of Mining and Engineering. There are several Technical Schools in various cities of the United States, such as Boston, Worcester, New York, Philadelphia, St. Louis, Chicago, etc., and there are magnificently endowed and very efficient Agricultural Colleges in that country. In Montreal, Principal Dawson, of McGill College, who has, with untiring zeal, been urging the matter for years, has succeeded, through the extended liberality of Montreal merchants, in establishing a school of Mining and Engineering in connection with that popular and successful University. The plan of the University of Toronto embraces schools of the same kind, and, no doubt, that flourishing institution will not lag behind the requirements of the country. Last year the Legislature of Ontario voted \$25,000 for the erection of a Technical College, in which a commencement might be made in teaching mining, engineering, architecture, drawing and other kindred branches, as well as the French and German languages.

The Calendar of the University of New Brunswick discloses a liberal provision for studies in applied Science, which have assisted in producing Railway Engineers of whom we may, at least, safely say that they have already *made their mark* on the surface of their native province, and that a very visible and tangible one. I trust, however, that in this respect we are but beginning. Science Education ought to be introduced into all the schools of the Province, and now that the President of this University is also a member of the Board of

Education, I hope that this will be the case. In education as in irrigation, we must proceed from the higher levels and work downwards. "The higher instruction," says Ernest Renan, "is the source of primary instruction. The strength of popular instruction in Germany springs from the strength of superior education in that country. The University makes the School. It has been said that the primary school was the conqueror at Sadowa. Not so; the conqueror at Sadowa was German science, philosophy, Kant,\*\*\* Fichte, Hegel." This was written in 1868. The statement made in regard to Sadowa will, no doubt, be felt to be quite as applicable to Sedan.

The old learned professions may be over-stocked, but the Universities can never furnish too many students and teachers of the Natural and Applied Sciences. At the present moment the Railway and Geological surveys of Canada make demands for qualified assistants that cannot be met in our own country, while an intelligent acquaintance with the fascinating study of nature is far from being as general as it ought to be. Who does not sympathize with Thomas Carlyle when he laments that no one taught him "the grasses that grow by the wayside and the little winged and wingless neighbours that were constantly meeting and saluting him, which salutes," he says, "he cannot answer as things are." "Why," he continues, "did not somebody teach me the constellations too, and make me at home in the starry heavens, and which I do not half know to this day?" Who does not agree with the Rev. Dr. Ryerson, the able Chief Superintendent of Schools for Ontario, when he says "that every youth should be taught the names and characteristics of the vegetables and flowers and trees with which he daily meets; the insects and birds and animals of his country; the nature of its soil and minerals; the chemical and mechanical principles which enter into the construction and working of the implements of husbandry; the machinery of mills, manufactures and mines; the production and preparation of the clothes we wear, the food we eat, beverages we drink, the air we breathe; together with the organs of our bodies, the faculties of our minds and the rules of our conduct?"

It would be a noble work if the University could send down teachers to the Schools to assist in imparting such teaching, much of which would be the delight of boys and girls. To my mind, one of the noblest works that the Alumni Association could engage in would be to aid in promoting such studies. The fly on the cathedral's dome cannot be expected to admire the work even of a Michael Angelo. The blind man cannot perceive the majesty of a golden sun-set nor the deaf

the harmony of sweet sounds. But why should not all our intelligent youths be taught something of God's works and be thus prepared to aid in man's predestined conquest of nature, through the knowledge of its laws? And as I would have the University send down such teachers to the Schools, so I would have the way, step by step, made easy for those who might wish to reach the University, which ought to be the greatest, the most popular, and the most useful Free School in the Province. It is now virtually free, the fees being only nominal, but I should rejoice to see all fees swept away, thus placing New Brunswick in the proud position of having a University absolutely free to all.

It should be the business of the teacher in the preparatory schools to discover the capacities of his pupils, and the bent of their minds, and to aid their development. Should he discover a lad who loved to ascend the stream of languages, but who had no delight in numbers; or one who was, above all things, absorbed in the study of form, and felt something within him impelling him, Raphael-like, to say, "I too am a painter;" or should a boy's bent be towards those constructive works which are the glory of modern engineering;—in all such cases such aptitudes should be cherished, and the conditions supplied for their full development. Or should there, in some modest girl, be detected a voice of wondrous sweetness and compass, giving promise of a Jenny Lind, a Ristori or a Christina Nilsson, the rare endowment of song should be cultivated, and its maturity watched over with all the enthusiasm with which we should note the blossoming of a century plant; or should a girl's taste tend towards cunning works of the needle, by which the painter's art is rivalled, then such models should be promptly supplied as might first be copied, and next surpassed, the young artist "adding" thereto "of her wit," and being taught to make for her happy lover, of a future day, articles of use and beauty like that which

Elaine the fair, Elaine the lovable,  
 Elaine the lily maid of Astolat,  
 Wrought for the sacred shield of Launcelot,  
 And braided thereupon  
 All the devices blazoned on the shield  
 In their own tint, *and added of her wit*  
*A border fantasy of branch and flower*  
*And yellow throated nestling in the nest.*

And here I must ask leave, ere I conclude, to say a word or two on a topic which might well be made the exclusive subject of an Eucœnial address. I refer to that of the admission of women to the Universities.

Whether this shall be done by means of separate Universities, as at that noble institution, Vassar College, or by separate Colleges in connection with the University being provided for women, or whether, as in some of the Universities of France, Austria and Switzerland, and the several Universities in the Western States—New England is about to go and do likewise—they shall be admitted to the same class-rooms with the male students, thus effecting a great economic advantage in regard to libraries, museums, laboratories, professors—these are matters of detail. The right of women to the highest and best education the best Universities in the world can give is as undoubted and self-evident as their capacity to receive it is undeniable. Why they have been so long denied such privileges will be a matter of astonishment to future ages. If we have respect to the enjoyments which a knowledge of science and literature imparts, who will we deny women's right to share in them? Is it reasonable to deride the reasoning powers of women, and yet to deny them the highest opportunities for mental culture? It is most inconsistent to admit and affirm the intimate relations which should subsist between husband and wife, and yet to deny her the means of entering into the most intimate fellowship with him, should he be a man of culture. It is now well understood that intellectual and moral characteristics may be transmitted from parent to child, and more especially from the mother to her offspring. It is admitted on all hands that woman as a wife and as a mother should also be an educator, and yet the means of securing to her the highest culture and of enabling her to be an educator of the highest class have long been denied. I believe you will share with me the pleasure of feeling that this state of things is about to pass rapidly away, nor will you fail to distinguish between woman's rights, as set forth in my humble plea, and the ill-favored agitation which bears a kindred name.

It is a familiar experience of our pioneer farmers, who penetrate the "forests primeval," that when they have caused the murmuring pines and the hemlocks to disappear before the axe, when the fires have scorched the sward, and the genial sun and the vital air have been brought into contact with the virgin soil, then there spring up entirely new growths of trees—the birch the maple and the ash. In like manner, when the light of science, in all its wide and enchanting relations, is freely communicated to all our youth, to boys with their inquiring and inductive tendencies, to girls with their intuitive and deductive bent, and their admirable gift of tongues, what individuality, what variety, what new discoveries, and new methods of discovery may we not expect?



In every system there must be a central force. In education the University should occupy that relation to the Schools. As the sun is not only the source of light and heat, but of motion in its various forms, exciting the breeze which fills the milk-white sails of the Marco Polos of the deep, and furnishing, from ancient reserves, the motive power by means of which the steam-going leviathans of modern commerce are propelled from shore to shore, so we would have the University, the Senate, the Professors, the Alumni, favoured by the Government, with his Excellency, the Visitor of the University, at their head, the Chief Superintendent rendering his intelligent aid, lead the grand procession of the Schools, until our own New Brunswick shall march on the van of educational progress, every nook and corner of it being illuminated by the light of science,—science, which, like the gently guiding star of the Eastern Wise Men, may aid in leading every one of its votaries to fall down in true adoration before the new-born King, the source and centre of all created harmonies.

